WD RE4

Enterprise SATA Hard Drives

Ideal for servers, video surveillance, and other demanding write-intensive applications, WD RE4 7200 RPM Enterprise SATA hard drives offer up to 2 TB capacity, 64 MB cache, 4th generation vibration tolerance and 5-year limited warranty.

INTERFACE
SATA 3 Gb/s

WIDTH/HEIGHT
3.5-inch/1-inch

ROTATIONAL SPEED
7200 RPM

CAPACITIES
250 GB to 2 TB

MODEL NUMBERS

WD2003FYYS	WD5003ABYX
WD1003FBYX	WD2503ABYX

Note: Not all products may be available in all regions of the world.

Product Benefits

Massive capacity
WD RE4 Enterprise SATA drives are available with up to 2 TB of cavernous capacity.

Dual processor
With double the processing power, WD RE4 boasts the highest performance of any drive in the WD RE family.

RAFF™
Enhanced RAFF technology includes sophisticated electronics to monitor the drive and correct both linear and rotational vibration in real time. The result is a significant performance improvement in high vibration environments over the previous generation of drives.

Dual actuator technology
A head positioning system with two actuators that improves positional accuracy over the data track(s). The primary actuator provides coarse displacement using conventional electromagnetic actuator principles. The secondary actuator uses piezoelectric motion to fine tune the head positioning to a higher degree of accuracy. (2 TB only)

StableTrac™
The motor shaft is secured at both ends to reduce system-induced vibration and stabilize platters for accurate tracking during read and write operations. (1 TB and larger drives only)

IntelliSeek™
Calculates optimum seek speeds to lower power consumption, noise, and vibration.

Multi-axis shock sensor
Automatically detects the subtlest shock events and compensates to protect the data.

RAID-specific, time-limited error recovery (TLER)
Prevents drive fallout caused by the extended hard drive error-recovery processes common to desktop drives.

NoTouch™ ramp load technology
The recording head never touches the disk media ensuring significantly less wear to the recording head and media as well as better drive protection in transit.

Thermal extended burn-in test
Each drive is put through extended burn-in testing with thermal cycling to ensure reliable operation.

Third generation dynamic fly height
Each read-write head's fly height is adjusted in real time for optimum reliability.

24x7 reliability
With 1.2 million hours MTBF (tested at 100% duty cycle), these drives have the highest available reliability rating on a high-capacity drive.

Applications

Ideal for servers, storage arrays, video surveillance, and other demanding applications.

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Specifications[1]	2 TB	1 TB	500 GB	250 GB
Model number	WD2003FYYS	WD1003FBYX	WD5003ABYX	WD2503ABYX
Interface	SATA 3 Gb/s	SATA 3 Gb/s	SATA 3 Gb/s	SATA 3 Gb/s
Formatted capacity	2 TB	1 TB	500 GB	251 GB
User sectors per drive	3,907,029,168	1,953,525,168	976,773,168	490,350,672
Native command queuing	Yes	Yes	Yes	Yes
SATA latching connector	Yes	Yes	Yes	Yes
Form factor	3.5-inch	3.5-inch	3.5-inch	3.5-inch
Performance				
Data transfer rate (max) Buffer to host Host to/from drive (sustained)	 3 Gb/s 138 MB/s	 3 Gb/s 128 MB/s	 3 Gb/s 128 MB/s	 3 Gb/s 128 MB/s
Cache (MB)	64	64	64	64
Rotational speed (RPM)	7200	7200	7200	7200
Average drive ready time (sec)	21	18	14	14
Configuration/Organization				
Heads/disks	8/4	4/2	2/1	1/1
Bytes per sector (STD)	512	512	512	512
Reliability/Data Integrity				
Load/unload cycles[2]	600,000	600,000	600,000	600,000
Non-recoverable read errors per bits read	<1 in 10^{15}	<1 in 10^{15}	<1 in 10^{15}	<1 in 10^{15}
Limited warranty (years)[3]	5	5	5	5
Power Management				
12VDC (A, max)	1.8	1.6	2.25	2.25
Average power requirements (W) Read/Write Idle Standby Sleep	 10.7 8.2 1.3 1.3	 7.9 5.9 0.7 0.7	 6.4 4.5 0.8 0.8	 6.4 4.5 0.8 0.8
Environmental Specifications[4]				
Temperature (°C) Operating Non-operating	 5 to 55 -40 to 70	 5 to 55 -40 to 70	 5 to 55 -40 to 70	 5 to 55 -40 to 70
Shock (Gs) Operating (2 ms, read/write) Operating (2 ms, read) Non-operating (2 ms)	 30 65 300	 30 65 300	 30 65 350	 30 65 350
Average acoustics (dBA)[5] Idle mode Performance seek mode Quiet seek mode	 29 34 30	 28 33 29	 27 30 29	 27 30 29
Physical Dimensions				
Height (in./mm, max)	1.028/26.1	1.028/26.1	1.028/26.1	1.028/26.1
Length (in./mm, max)	5.787/147	5.787/147	5.787/147	5.787/147
Width (in./mm, ± .01 in.)	4/101.6	4/101.6	4/101.6	4/101.6
Weight (lb./kg, ± 10%)	1.66/0.75	1.49/0.68	0.99/0.45	0.99/0.45

[1] As used for storage capacity, one megabyte (MB) = one million bytes, one gigabyte (GB) = one billion bytes, and one terabyte (TB) = one trillion bytes. Total accessible capacity varies depending on operating environment. As used for buffer or cache, one megabyte (MB) = 1,048,576 bytes. As used for transfer rate or interface, megabyte per second (MB/s) = one million bytes per second, and gigabit per second (Gb/s) = one billion bits per second. Effective maximum SATA 3 Gb/s transfer rate calculated according to the Serial ATA specification published by the SATA-IO organization as of the date of this specification sheet. Visit www.sata-io.org for details.

[2] Controlled unload at ambient condition

[3] The term of the limited warranty may vary by region. Visit support.wdc.com/warranty for details.

[4] No non-recoverable errors during operating tests or after non-operating tests.

[5] Sound power level.

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